

ESTABLISHED 1848



# COLMAN'S RURAL WORLD.

DEVOTED TO AGRICULTURE, HORTICULTURE, HORSES, CATTLE, SHEEP, SWINE, ETC.

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## COLMAN'S RURAL WORLD

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Published every Wednesday, in Chemical building, corner of Eighth and Olive streets, St. Louis, Mo., at one dollar per year. Eastern office, Chalmers D. Colman, 420 Temple Court, New York City. Advertisers will find the RURAL WORLD the best advertising medium of its class in the United States. Address all letters to COLMAN'S RURAL WORLD, Chemical Building, St. Louis, Mo.

While the RURAL WORLD is published at one dollar a year, it has temporarily allowed old subscribers to send actually NEW OR TRIAL subscribers with their own subscriptions at fifty cents a year, in order to largely increase the circulation and influence of the paper. This price is less than the cost of the white paper, presswork, folding, wrapping, mailing and preparing the postage, saying nothing of any other of the large expenses of maintaining offices, paying salaries and conducting such a paper in a large city. Renewals, unless accompanied by one or more NEW subscribers must be at one dollar a year. All names are dropped as soon as subscriptions expire. The month named on the address tag, pasted on each issue, shows the month subscriptions expire, and renewals should be made two or three weeks before, so that names shall not drop out of list. It is gratifying to the proprietor to be able to state, in his half century's experience in conducting this paper, it has never enjoyed the patronage and prosperity it now does. Its circulation is increasing in a wonderful degree, and its advertising patrons, many of whom have used its columns for a quarter or a third of a century, are more than pleased with results. Let all our friends unite and press forward in extending its sphere of influence. It will do for others what it is doing for you, so get others to join the great RURAL WORLD army and receive the same benefit.

The St. Louis Fair will be held October 7-13, 1901. Because of a recent sale of the Fair Association property, it was assumed by some that the real estate was to be put on the market and that this marked the end of the fair—that none would be held this fall. We notice that our Missouri exchanges are so stating, and take occasion to announce that the fair will be held as usual.

Illinois farmers are deeply interested in House Bill No. 315, that is now before the Illinois General Assembly. The bill provides for the extension of the work of the Agricultural College and Experiment Station of the state.

It does not seem to be understood that in Illinois, as in Missouri, and some other states, the State Agricultural College and Experiment Station which came into existence through acts of the United States Government, are almost, if not wholly, dependent on the Government for income. It was not the expectation when these agricultural colleges and experiment stations were established, that the income from the land grant funds, and annual appropriations from the United States treasury were to be their only income; it was assumed, and properly, that the several states would supplement the Government appropriations and thus aid in developing the agricultural resources.

The Missouri Legislature, at the session recently held, recognized the obligation of the state to the State Agricultural College in providing buildings and equipment and added to its working funds by appropriating money for the support of a Chair of Dairy Husbandry. The time is at hand when Illinois must also put some of her own money into agricultural college and experiment station work, and not leave this to be carried on entirely with funds provided by the United States Government. Our Illinois readers should lend their aid to those who are pushing House Bill No. 315 by writing to their representatives and senators and urge them to support the bill.

### RECOGNIZED VALUES OF A CORN CROP.

Of recent years much has been said and written derogatory of corn both as to its effect on land and regarding its feeding value. That it is one of our best carbonaceous foods and has a place in the animal feeding economy must not be ignored. But it is so easy to become extremists—either feeding all corn or condemning it in toto. Its true value should be understood as a feed, and then have its true place in the daily ration in the barn and feed lot.

While land in many sections has been in corn until corn will return such small yields that the farmer is forced to plant some other crop, yet our progressive farmers recognize the value of a crop of corn to the soil. The praises of clover have been

sounded so long and so loud that other crop values may be ignored.

Mr. T. B. Terry has at institutes during recent years been laying great stress on fertility developed by cultivation, and surely a crop of corn would give such results.

Sup. O. C. Gregg of Minnesota has the following to say on this subject: "It is a well established fact that shading land contributes to its fertility. A plank or board laid upon the land and left there for a season will add to the fertility of the soil it covers. The summer fallow is opposed to this method of fertilization; it is also contrary to nature's method. We now understand that in the cultivation of corn there is not only value in the kernel and fodder, but also from the shade of the growing plant."

Corn is also a good crop to clean land of weeds if the cultivation is thorough. To secure this end the farmer must employ such implements as will most effectively destroy the weeds with the least expenditure of labor. Despite the fact that a crop of corn will enable one to clean a field of weeds, if rightly tilled, yet many corn fields are weed seed beds. As weeds use soil fertility and moisture which should go to the cultivated crop, farmers need to use methods and implements in the culture of a corn crop that will enable them to attain clean land. The knowledge of such methods and implements is preparation for a good corn crop the ensuing season, and as essential as is the securing of good seed corn. These will vary in sections and hence farmers must be governed by environment.

AGRICULTURAL EDUCATION.

We have before us a printed copy of a paper by Dr. William Trelease, director of the Missouri Botanical (Shaw's) Garden, St. Louis, read before the twenty-first annual meeting of the Society for the Promotion of Agricultural Science, on "The Botanic Garden as an Aid to Agriculture." Those among our readers who have had the good fortune to visit Shaw's Garden, as it is known in St. Louis, and admired the beautiful array of flowers, shrubs and trees, comprising one of the largest collections of plants in the world, will possibly ask, on noting the subject of Dr. Trelease's paper, how agriculture—the growing of corn, wheat, potatoes and other farm crops—would be aided by such an institution. What is agriculture? In answer let us quote the following from Dr. Trelease's paper:

"Not long since an enthusiast made the effort to introduce instruction in horticulture into the curriculum of the public schools of a western state. In due course of time his proposition came before a committee of the teachers' association of that state and in a masterly report this committee recommended that the subject be stated as agriculture, of which horticulture was held to be merely a branch, and that agriculture be taught, not as a trade, but in its essence, thus making it a branch of the nature study which is now so popular through our entire public school system."

The sense in which agriculture was conceived by the committee referred to is the sense in which Dr. Trelease discussed his subject, and it is in that same sense that the writer has used the word in advocating the introduction of agriculture into our public school work.

Dr. Trelease says further in his paper: "I have looked over the program of this meeting with some interest, and have been pleased to note the extent to which agricultural education occupies it, for it does not require any great insight to perceive that agricultural science, to which this society is devoted, cannot be very helpful until its essence shall have been incorporated into agricultural practice—result only to be reached by agricultural education.

"Whatever else may need to enter into this education, a very direct and practical knowledge of the plants that agriculture concerns itself with, either as its ultimate end or as intermediary steps to that end, is a prime requisite; not a knowledge of the wheat and the tares or of the barren and fertile fig-tree only, but a knowledge of why the fig-tree is barren and of what it is within the tares that prevented the sowing of their seed from increasing instead of injuring the grain crop; and so, whether taught for itself or as a part of agricultural science, botany as it is now taught calls for the garden as an indispensable means to the end sought."

And thus it is that we have urged that what we have called "outdoor textbooks" be attached to every rural school; in other words, a garden that may be cultivated by teacher and pupils as a means of instruction in plant life and growth, and through this the imparting to the children of the knowledge of the underlying principles of agriculture.

PHILIPS COUNTY, NEB.—The outlook now is for one of the largest winter wheat crops Nebraska ever raised. The whole state has had plenty of moisture. Fat cattle and hogs are scarce. Stock cattle are rather thin.

March 28. GEO. A. ARNOLD.

FRANKLIN CO., ILL.—We have a fine prospect for an abundant fruit crop through this part of the state this season. Wheat and timothy look well, but very little oats have been sown yet, owing to too much rain. All kinds of stock have passed the winter in fair condition. April 1. H. H. W.

### MR. JEWETT CORRECTS MISTAKE.

Two and One-Half Bushels Sorghum Seed Per Acre.

Editor RURAL WORLD: In my letter which you published March 20, under the head of "Success With Sorghum," I fear you have made me subject to criticism by those who are posted on sorghum culture, and, possibly, to lynching by those who are not, should they follow my directions as printed. You have made me say, either through your mistake or mine, "Sow not less than two and one-half pounds per acre." This would be about one-fiftieth of the proper amount, and would make about one stalk to sixteen square feet, sixteen to one, you know. I fear the resulting crop would make rather coarse hay. It should have

radishes and lettuce should be sown as soon as possible. The former are a necessity; the latter for a few messes isn't bad with vinegar and sugar. In short, a good home garden is half the living, and the better half, in its season.

I imagine I can see the look of intense disgust on my brother farmer's face when he has achieved the above result, and hear him say, "That comes from fooling them darn fool fellers that writes for the papers. They don't know straight up now. Good farmers don't have time to write for the papers."

I wonder how much truth there is in that last. After reading some of the unpractical things written I have sometimes thought there was, at least, some.

However, since I see that so small a man makes so great a difference I don't know but we had better give the writer another chance.

Have been driving hedge posts lately and found a number of otherwise good ones, too crooked to be driven by striking on the top. We overcame the difficulty by placing a strong chain around the post, a large wedge between the post and chain, and then struck on the wedge.

It is a success. P. J. JEWETT.

Bates Co., Mo.

Mr. Jewett's "copy" did read "two and one-half pounds."

We noticed it when first going over the article, but failed then to correct, and later overlooked it.

The publishers of a leading journal claim that all matter printed in the columns of that publication is read after being received by them and before it appears in print from 15 to 20 times, in an effort to eliminate all mistakes. We are unable to exercise quite as much care on matter that goes into the RURAL WORLD, but it, doubtless, would surprise many to know how many times our "copy" is read by editors and proof readers before it reaches the subscribers; yet mistakes will appear.

### WEEK BY WEEK.

Editor RURAL WORLD: March has been a most miserable month. Slush and mud, rain, sleet and snow. In these latter days, however, spring has been busy underground. The bluegrass has put on an additional tint of green, and the flowers are thrusting their green leaves up to greet the sun.

The birds were slow coming. The first that I heard was the meadow lark. It was after the middle of the month. Then one morning shortly afterwards I heard robins and bluebirds. But the ground is sodden and it will be some time before oats are sown. I never did like to mud in grain. I never thought that anything was gained by it.

Speaking of birds, I am confident they migrate by night. But I am equally confident that they are guided by definite landmarks. The bird and the beast have a wonderful and correct faculty of travel. This person proved it last summer. It was 48 miles of strange road between his home and his charge. In returning from his first visit he let faithful Nell go as she pleased. There were many turns in the road, but she took every one without the parson touching the lines. She never hesitated, nor ever made a mistake.

The birds are guided by forest and stream, by towns and cities, and go directly and surely to their destination. The larger fowl seek their food at daybreak. I have gone early to my pond to see the gulls and in nearly every instance have been gratified. Such birds as find their food in the mud, as the sandpipers and snipes, are soon satisfied; but ducks, geese and cranes take plenty of time to feed, if not molested. The smaller birds seem to have a sense which distinguishes between food and mud. Ornithology is a delightful study and I have been its devoted votary all my life. There is no more favorable calling for its students than that of the farm.

One of my neighbors is a nurseryman in a small way, but this spring he is shipping in a great deal more than ever. He says that the prospect for sales was never so good. On this new plantation of mine I am going to set out as much fruit as I can afford. It pays not only in making the home table a delight, but it brings in the dollars. It is one way of making dollars grow on bushes and trees. When one goes to town for the mail, or other errand, it is not disgraceful to take baskets of fruit along to pay for a few groceries or other necessities. It isn't a bad feeling which follows the giving of a basket or two to such as are unable to buy. Of course, this is a great deal better for it.

Thinking of spring planting, I reached the conclusion some years ago that all the potatoes should be planted as soon after April 1 as possible. The early varieties come into market sooner and earlier, but was frost bitten a little.

EDWARD B. HEATON.

Warren Co., Ia.

### DRAZZING FOR CORN.

Editor RURAL WORLD: I believe we must drag the ground before planting corn. Where we dragged our corn ground last year the worms did not bother the corn; but where we did not drag the ground the worms destroyed most of the corn. Where we dragged our corn ground last year our corn did fine, but the rest of it wouldn't amount to much, but after three plowings it did fairly well, and was frost bitten a little.

McDONOUGH CO., ILL. T. A. MORROW.

varieties require the entire season to mature. There is a vast difference between a mature potato and one where the jacket will slip.

Editor RURAL WORLD: This is a favorite dish with me. I am as anxious for it as a cow is for young bluegrass. It is healthy to commence with, and the way the matron serves it, it is next to green peas. I wouldn't understand a person who didn't like green peas.

I am much obliged to Mrs. Lyda for the tobacco remedy against the pea and bean weevils. We are going to try it if we can find any "long green" in the neighborhood. It has been years since there has been any tobacco in the house, but the sake of good peas and beans we will tolerate it for a while.

Radishes and lettuce should be sown as soon as possible. The former are a necessity; the latter for a few messes isn't bad with vinegar and sugar. In short, a good home garden is half the living, and the better half, in its season.

April is the month when I wanted my young calves. I never lost one born in that month, and they all did well without exception. There was never blackleg on the place or hog cholera or plague. What more could a farmer ask? A person-farmer? And this reminds me: There was recently the Rev. Elijah Kellogg. He

was a graduate of Bowdoin College, but was more of a farmer than he was a preacher. He wrote many books for boys, all of which are first rate. His "Good Old Times" series and the "Wolf Den" series, in my opinion, are not surpassed in all the literature of the world for boys. I read them myself with great satisfaction, for I am yet a boy though somewhat along in years. Well, from calves to boys is quite a step. I mind well, however, when I was called a "great calf," because I insisted on drinking a pint of milk from the cow at every milking.

A lady in Chicago who read "the person's" notions of flowers in a little floral magazine sent him the other day a box of a small flat leafed cactus. She wrote that they would do no good for her. The dirt was dry about the roots of the plant and exposed the trouble. There were bunches of the larvae of some insect all through the roots. They were about the size of the larvae in the hill of large ants. I couldn't find the mature insect, but thought it might be some sort of a fly. It was no wonder the plants would do no good. There were enough of the white things to rule five times as many plants.

The matron shook the things into the fire and thoroughly washed the roots, and the plants are growing and beginning to look healthy. I wish some one of my readers would tell me what the insects were. A little knowledge of entomology wouldn't damage a philosopher. It would seem studying vegetation, that it would largely benefit a farmer.

It is a pleasure to us western men to know that St. Louis will have a great exhibition. Perhaps the parson may get to St. Louis again. The last time that he was there was in 1864 and then merely passed through. St. Louis should omit no opportunity of keeping it before the whole people. Make it the text of a continued preaching. Thorough advertising always pays.

It pays, also, to have one's seed of small grain, and grass seed, perfectly clean. The most of our weed pests have reached us through foul seed. Hence a fanning mill should be on every farm. I have had trouble in this direction. A wagon, in early days, camped in our truck patch in early spring. Where they fed I found that season sandhoppers. It took labor and watchfulness to be rid of them. Somebody dropped some seed of the velvet weed, or pieplant, by the side of the path that led through the corn to a stock well. It was several years before I was rid of them. At another time I bought a packet of seed of 500 varieties. When they developed there were two abominable pests among them. One was the ox-eyed daisy. It took several years to be rid of it. The other was a genuine Canada thistle. I pulled it up and burned it in the kitchen stove. So I feel justified in saying, see that the seed which you buy is very clean. It will often save worry and labor.

Now I do believe that it pays to run after new ventures in fodder or grain. Where you can grow timothy and clover to perfection what else do you want? The same of corn; when you can grow good crops of it why run after such stuff as spuds and field peas or soy beans? Clover and timothy make good fall pasture and spuds and the other things do not. I have never yet run after these new things, and will show results with any man who has.

If there is any more satisfactory prospect for winter than a heavy growth of timothy and medium red clover, it has not fallen under my observation as yet. Nor do I believe that it ever will.

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McDONOUGH CO., ILL. T. A. MORROW.

### TEACHERS IN RURAL SCHOOLS.

More Rigorous Law Needed to Govern Their Selection.

Editor RURAL WORLD: In view of the fact that so many teachers in our free schools, more particularly in rural districts, are very negligent or careless in doing their full duty, my indignation has become somewhat roused. I have seen the district in which I have lived for nearly 45 years imposed upon, or defrauded out of the annual funds levied for educational purposes so often, that it seems there should be more stringent laws and regulations governing the issuing of teachers' certificates. The law of Illinois gives to one man for each county the power or individual judgment in placing before him to be appointed.

It has been said: "Two heads are better than one, if one is a sheep's head." And I believe that in granting to the county school superintendent or any single individual absolute judgment as to whom shall instruct the school populace is wrong, and a hindrance to the intelligence of this age. However, there could be with the present system of superintendents, additional restrictions in granting unworthy certificates to teach.

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## The Dairy.

### THE BUSINESS GROWS.

New creameries, cheese factories and skim stations are being established in Missouri, thus proving that the dairy business is growing in the state.

A skim station was opened recently at Milan, Sullivan Co., Mo., and 265 pounds of milk were delivered on the opening day. The plant is leased to the Brady-Meriden Creamery Company of Kansas City and the cream will be sent there for working into butter. S. L. Childers brought in 471 pounds of milk and got a prize for bringing in the largest amount of milk. J. W. Sims got the second prize with 249 pounds and Robert Caldwell brought in 208 pounds and got the third prize.

On March 6 a skim station was opened at Collins, St. Clair county, with over 1,400 pounds of milk. This plant is also leased to the Brady-Meriden Company.

A great crowd was in town on the opening day and one of the notable features was an address by Gov. W. A. Poynter of Nebraska.

W. W. Marple, manager for the Brady-Meriden Co., presented the prizes for the most milk delivered on that day. The first prize, a 10 gallon milk can, was presented to John Hughes, who brought in 601 pounds of milk. G. T. Raymond won second with 174 pounds, and Berry Smith third with 85 pounds.

In addition to the foregoing, skim stations will soon be opened at Purdin, in Linn county, and Fairplay, in Polk county.

### A SCRUB (?) DAIRYMAN'S DICTUM.

Editor RURAL WORLD: Three months have passed since the dairy meeting was held in Kansas City. At that time they told me something that they did not show me.

I have been milking cows for a living for 15 years and have always been considered a heavy feeder, some of my neighbors said extravagant. You remember I was told the same thing at the dairy meeting. At that time I was feeding my cows about eight pounds of bran, eight pounds of cob chop and all the sorghum hay they would eat, besides turning them into a clover field at night. During that week I tested all my cows, my biggest test being 6 per cent; most of them about 5 per cent.

The talks made at the meeting convinced me that I was feeding too much. I went home and began reducing the feed, and to my surprise the cows gave the same number of pounds each day. I continued the reducing process until I was feeding just four pounds of bran, four pounds of cob chop, but had changed to corn fodder for rough feed, and yet my cows gave the same number of pounds of milk daily. I thought what a fool I had been. But the end was not yet. After about 30 days my cows began to look like my neighbor's, who does not believe in big feeding. It was remarkable how quickly they became thin. I also noticed that I was not making as much butter as usual, so I began testing again. We had been told that the feed had nothing to do with the per cent of butter fat in a cow's milk, and yet it hasn't, but my 6 per cent cow tested 4 1/2 per cent, the loss in The rest of the herd ranging from 1/2 of one per cent to 1/4 per cent.

Now Mr. Editor, I never did believe that a poor, thin cow would give rich milk, and I always did believe that a fat cow would give better milk than a thin one; and now after "showing myself" all the professors in the United States to the contrary, I intend to feed always with a big "F." The rest of you can do as you please. I am a "scrub dairyman" and don't want to be anything else.

I made more butter this week than I have for a long time. This is the feed-corn fodder, lots of clover hay and about 12 to 14 pounds cob chop and bran daily. I fed cottonseed meal to three cows for three weeks, two pounds per day. It did not increase the milk one ounce. I quit it. H. C. DEHONEY.

Jackson Co., Mo.

Our friend Dehoney classes himself a "scrub dairyman" and declares he does not want to be anything else; yet we are inclined to dispute with him his right to put himself, without qualification, in that class. "Scrub dairymen" do not usually have fat cows, we do not know whether their cows give 2 per cent or 6 per cent milk, nor do we go to dairy meetings and do not try to make use of what they hear regarding methods of feeding. Hence we must insist that Mr. Dehoney be considered in the up-to-date class. But the up-to-date people are simply progressive people and in making progress mistakes are sure to be made. It is not to be assumed for a moment that among "all the professors in the United States" there is one who "knows it all" about dairying. There is yet much for the best experts to learn about feeding dairy cows with respect to best and most economical results, influence on the milk product in various ways and otherwise.

With respect to the influence of food on the per cent of butter fat, so far as evidence thus far developed shows, we are forced to the conclusion that neither the quantity nor the quality of the food, under normal conditions, will affect it. While there is some evidence, apparently, in opposition to this conclusion, the great preponderance of proof supports it. And

Jasper Co., Mo.

let us add right here the statement that this conclusion is not the result of opinion or "theory" on the part of "professors," but of facts developed by carefully conducted experiments many times repeated. And the conclusion cannot be set aside by what Mr. Dehoney and thousands of other men believe. They must prove by carefully conducted trials, with records kept of daily weighings of food, yield and test of milk and carried through two or more seasons that the "theory" that a fat cow gives richer milk than a thin one is correct.

Now regarding Mr. Dehoney's feeding as to whether it was too heavy or not, that cannot be determined exactly with out knowing how much sorghum hay and clover the cows were eating. We certainly should regard eight pounds of bran and eight pounds of cob chop more grain than would be necessary along with an unlimited quantity of sorghum hay, assuming that this was of an appetizing quality this supplemented by clover pasture.

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stomach and the important conclusion reached by Dr. Babcock is that it acts continually on the casein in curd, transforming it by degrees from an indigestible to a digestible substance. Formerly it was held that the work of bacteria caused the ripening of cheese. The new discovery entirely upsets that theory. Further experimentation then developed the fact that the action of the galactase did not cease under temperature as low as the freezing point and even lower, but at the freezing point the action of cheese bacteria ceases and in time the bacteria die. These facts being taken in conjunction it was determined to test the ripening of cheese in refrigerators and at the meeting above alluded to Dr. Babcock presented samples of eight months old cheese subjected while ripening to temperatures not higher than 40 degrees F. These cheeses were of the finest texture, were free from holes and had no mold on the exterior surfaces. Moreover, the cheese itself was so "broken down" as to be almost in a condition to be spread like butter on ordinary bread. Hundreds of people present at the meeting tested the cheese in all possible ways and under every test results were the most satisfactory.

Dr. R. A. Pearson, assistant chief of the dairy department of the Department of Agriculture at Washington; Prof. J. A. Ruddick, assistant dairy commissioner of Canada; J. H. Monrad of Illinois and others participated in testing the cheese. Dr. Pearson declared that the discovery presaged the opening up of a new era in cheese making. A large Chicago dealer who was present was so charmed with the salable qualities of the samples of cheese offered that he announced his intention of immediately equipping refrigerators where the entire output of some good cheese factory can be ripened after the new fashion.

"There seems to be no flaw in the process as it has been tested. There is little doubt that the new product, on account of its superior healthfulness, more attractive appearance and immeasurably greater digestibility, will soon take a leading position in the world's trade in cheese. Verily Dr. Babcock has rendered not only his state but the whole world one more great service and it is now more pleasant than ever that Wisconsin is to reward him for his splendid achievements while he yet lives to enjoy the renown and the more tangible results accruing from the revolutions he has caused in dairy work."

We can at this time only hint at what this discovery, if there be no flaw, will mean to the dairy industry of Missouri and other southern states. The difficult part of cheese making in this latitude is in providing proper curing conditions; but with the discovery of how cheese can be cured in cold storage, and artificial refrigeration available in St. Louis and other centers, it would seem perfectly feasible to make the cheese on the farms and in the local factories, ship at once to cold storage houses, there to be cured and distributed from there when ready.

### DAIRY INSTRUCTION

In the Missouri Agricultural College

The writer had the pleasure of visiting the Missouri Agricultural College recently and witnessing some of the closing exercises in the short course work. We were much gratified at the interest shown and the character of the work that had been done, much of it under quite adverse conditions. In dairying particularly was the practice work in butter and cheese making carried on under difficulties; yet, judging by the quality of the butter made, the 25 students taking this work were well instructed.

The letter from Mr. Willoughby which follows, written shortly before the end of the short course, will interest our readers and give us some conception of what may be expected when that dairy building which the 41st General Assembly authorized the building of is ready for use, and the chair of dairy husbandry is prepared to give instruction in dairying:

Editor RURAL WORLD: The third week of the instruction in dairying given the short course students at the Missouri Agricultural College closed to-day—Saturday. The class comprises 25 intelligent young men from various parts of Missouri, Illinois and Iowa, some of whom have had long experience as dairymen. The shabby little old dairy building has certainly presented a busy scene with these 25 students and nearly a car load of dairy machinery all crowded into a space 15x25 feet in area. But the amount of honest, thorough work which has been accomplished is really surprising, considering the shortness of the time and the lack of adequate space and facilities. Believing that some of the RURAL WORLD readers will be glad to hear about the work, I take pleasure in giving herewith a brief outline of what the boys have learned:

EQUIPMENT.—First, let me describe the apparatus. The equipment is only intended for teaching farm dairying, and all the machinery is operated by hand. We now have two hand separators, a No. 3 Baby De Laval and No. 5 United States machine, one 75 gallon receiving vat for milk, a 30 gallon cream vat, 30 gallon Victor combined churn and worker, a 20 gallon Curtis square churn, one hand power Mason revolving butter worker, one lever table worker, one Reid worker, and the Eureka printing outfit. The building contains a 10 horsepower upright boiler and a large sink for washing and sterilizing. One 8 can Cooley creamer, a refrigerator for butter, platform scales and small butter scales, completed the equipment for the dairy room. The testing department, in the attic upstairs, contains one steam turbine Babcock tester and three smaller hand power testing machines. There is an abundance of glassware in the shape of milk, cream and skim milk testing bottles, sample jars, pipettes and acid measures. Also two lactometers and two complete outfits for testing the acidity of milk and cream by both Mann's and Farrington's tests. This room also contains a 40 gallon steam heated cheese vat, with knives, strainers, curd racks and other utensils, and one upright screw press with cheese hoop, both cheddar and Young America cheese.

WHAT THE BOYS ARE TAUGHT.—During the morning of each day the students attend lectures on dairying and related subjects. The lectures have embraced the subjects of the elaboration, composition and testing of milk; various methods of cream separation and ripening; the churning, working and marketing of butter; the principles of cheese making; dairy bacteriology, pasteurization, care of milk on the farm; the feeding and handling of dairy cattle, including common diseases; and the statistics and profits of the dairy business.

Calves will begin to nibble at hay about the same time that they commence to eat grain. When from six to eight weeks old

## "ALPHA-DE LAVAL" CREAM SEPARATORS.

The De Laval Cream Separators were first and have a ways been kept best. They have always been the most efficient and most popular, imitating machines made for young calves, though it may be gradually introduced into the ration after from three to four months. Nothing but clean, buttermilk is used.

The greatest difficulty in raising calves is undoubtedly scouring. Here, as elsewhere, "an ounce of prevention is worth a pound of cure." The principal causes are overfeeding, feeding too much cold milk, feeding grain with milk, dirty milk pails, unwholesome feed boxes and irregularity of feeding. An intelligent and skillful milker can easily prevent the symptoms of this disease as soon as it appears, in which case the ratio of milk should be cut down one-half or more, and gradually increased again as the calf is able to stand it. A more experienced feeder will do his best to keep the milk sweet.

Heating milk seems to produce chemical changes that help to prevent scouring. The best way to do this is to add a pint of buttermilk to each quart of milk.

Calves buckets must be kept clean by rinsing and scalding after each feed. No more grain or hay should be given than the calves will eat clean. Should any calves be found to eat more, remove before giving any fresh feed. Calves like salt the same as any other animal.

To summarize, warm, sweet milk, given in clean buckets, with access to cornmeal, clean water, salt, plenty of sunlight, shelter and bedding in cold weather, shade in summer and regularity and kindness in treatment will insure good, thrifty calves that will gain from a pound and one-half to two pounds daily.

THE SAMSON WIND MILL.

Since the comfort and health of men and animals, to say nothing of profit, depend more largely upon a liberal supply of good pure milk than upon any other article, it is not surprising that people always become interested in anything which tends to improve these conditions. Adapted to all conditions, the modern wind mill enters into practically every plan which embraces home or farm water power. The name of this class upon the market differing as widely in plans of construction as the individual ideas of the various manufacturers. All are so well used in a greater or less extent with varying results.

With a full knowledge of all the existing difficulties and the actual requisites of the country, the Stover Mfg. Co. of Freeport, Ill., the manufacturers in the art of wind mill construction, in the year of building of a mill that should cover all the points and that should be made so made and objectionable features should be avoided. The first wind mill ever made was the Samson Galvanized Steel Wind Mill, which was first introduced last year, a cut of which we show with this article. The manufacturers assure us that in the single years in which this mill has been upon the market it has found its way into every little section of this country, from the forest lands. The manufacturers assure us that in one instance where the mill has been sold it draws forth the most earnest praise because of its recognized superiority in plan.

The work has progressed smoothly and rapidly and while several of the class had never made butter or even cheese made, they are all able now to go through with all portions of the work with very little help or instruction. By the use of the blanks the routine is soon impressed upon their minds and they carry the process through in the same way from day to day. Several valuable prizes have been offered to the dairy students this spring, and next week we will have a butter making contest for a first prize of \$25 and second prize of \$15, the packages to be scored by an expert commission man.

If the readers of the RURAL WORLD are interested, I should be glad to explain in minute detail the method of butter making as taught in the school, from the time the milk is drawn until the product is finished. Such a description might give helpful suggestions or perhaps draw out valuable discussions. Very respectfully,

C. L. WILLOUGHBY,  
Instructor in Dairying, Missouri Agricultural College.

Columbia, Mo., March 16, 1901.

SKIM MILK CALVES.

Within the past decade Kansas has amply demonstrated her superior natural advantages for dairying, by raising from a position of comparative obscurity to a foremost rank among the states noted for the excellence of their dairy products. In response to the special invitation of Secretary F. D. Coburn of the State Board of Agriculture, Prof. D. H. Otis of the Kansas Agricultural College ably discusses many features pertaining to profitable dairying in Kansas and elsewhere in the recent biennial report of the board. What he has to say concerning the important problem of rearing calves upon skim milk follows in part:

When calves six months old are worth from \$18 to \$20 per head, and when the profits from a good milk cow are so greatly enhanced by raising the calf on skim milk, it is vastly important that we know, first, to raise a No. 1 calf, and second (especially to the man with limited capital on high priced land), how to accomplish this result through the medium of skim milk. The following points on feeding skim milk have been gleaned from actual experience from handling calves:

The young calf may either be taken from the cow a few hours after birth or left until its mother's milk is fit for use. Where the cow's udder is in good shape, it is easier to teach the calf to drink when it is taken away before sucking at all. In nature, the calf gets its milk often but in large double gear, the main shaft, with its two pinions engaged, is very long, providing an even, steady motion. The boxes carrying the bearing are of the entire gear are unusually long and are interchangeable. They may be easily and quickly replaced without removing any part of the mill. Long boxes and long shafting and divisional long shafting and overhanging strain are characteristic of old-style wind mills. These are but a few of the points of superiority introduced in the Samson.

These things are due largely to the new principles in wind mill construction introduced in the Samson. A leading feature is the wonderful double gear. It consists of two powerful gear wheels secured by fasteners, one by a long pinion, the other by a short shaft, which makes this practically as one solid gear. The pitman operates from the wrist pins between the two gears, the teeth being distributed to the load with almost no vibration. The main shaft, with its two pinions engaged, is very long, providing an even, steady motion. The boxes carrying the bearing are of the entire gear are unusually long and are interchangeable.

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## Horticulture.

S. H. Linton, late of the firm of Linton & Kaup, nurserymen at Marceline, Mo., has become the manager of Dr. Evans' commercial fruit farm, Des Moines, Ia. RURAL WORLD readers will be pleased to know that Mr. Linton will continue to contribute to our columns, for he is so well informed regarding all phases of horticulture that articles from his pen cannot fail to be instructive. We shall look for articles of still greater interest from him when he gets well settled in his new work.

### HORTICULTURAL TALKS.

DAMAGED APPLE TREES.—A subscriber says that he bought a lot of apple trees that were injured by the severe winter two years ago. Some died; others still living have dark wood inside; he wishes to know whether they are worth nursing or whether he had better grub them out and plant others. This is something new to me, and I can give no other advice than what would be done if the trees were mine: If there is sound wood yet near the ground I would cut them off in the sound wood and let the sprouts grow. Let two or three sprouts grow and about midsummer pinch the weakest at the top, leaving the strongest unpinched. Next spring take all off but one. These will make good trees and come into bearing as soon, or sooner, than if new ones were planted, and save the expense of the trees, as well as the planting. I have an acre or two of just such trees and they are doing well. The rabbits barked about 3,000 so that they were not fit to sell. I sawed them off at the ground and treated them as above stated.

THE EQUINOX.—This 21st day of March is the day the equinox is due, but we have had dashes of the storm several times, and this morning the wind is in another direction with the ground frozen hard.

Even if I did caution our readers to go slow in exposing tender plants too soon, I was induced to loosen up the covering of my pet rose, and found it in prime condition, the buds already beginning to swell. Last night, when it began to get cold, just before retiring, I took a heavy old overcoat and covered this rose bush with it. How many rose bushes have had so much honor bestowed on them?

My Burbank, Red June and Hale plum trees are almost ready to open, and may have been hurt somewhat last night.

SHORTHENING ROOTS.—Many years ago, when I did not have much experience in planting, I received some grape vines with roots a yard long. They were left whole and spread out. They lived, but made a poor growth. Now I cut all side roots back to about four inches. I am considerably converted to Stringfellow's method. The old notion that the fine fibrous roots should be saved is erroneous. They all die and leave a blank where they rot off, while a clean cut on a larger root soon callouses and sends out fresh roots. Pear trees (standards) sometimes have not a fiber to their main roots, yet they grow. I cut but little off the tap root; however, this is the anchor sheet of a tree.

THE BLOODGOOD PEAR.—Mr. Henry asks me whether this is a good pear. Yes, to my taste A No. 1, and is among the first to ripen. It is not quite medium in size, bears well, is as free from blight as any other, and has a tree yet of a planting of 25 years ago. It is not a good selling pear, as its color is against it, as it has a russet skin. It has an aromatic flavor that is to me very pleasant, and no other pear has it.

BEURRE BOSC is one of the very best pears. The reason it is not found in the catalogs is because it is such a poor grower when budded near the ground that nurserymen don't like to grow it. Top grafting is the remedy for this.

Bluffton, Mo. SAMUEL MILLER.

FORMULAS FOR SPRAYING MIXTURES.

Editor RURAL WORLD: Will you please publish the different kinds of spray mixtures and when and how to use them?

Perry Co., Mo. J. T. HISELL.

The following formulas for the Borda mixture, which is in general use as a fungicide, are published in Bulletin No. 1 of the Missouri State Fruit Experiment Station by Director J. T. Stinson. The formula usually recommended is as follows: Copper sulphate, 6 pounds; fresh lime, 5 pounds; water, 45 gallons.

The formula used at this station in the experiments for bitter rot is: Copper sulphate, 5 pounds; fresh lime, 5 pounds; water, 50 gallons.

HOW PREPARED.—The copper sulphate is dissolved in from 5 to 10 gallons of water or may be dissolved in two or three gallons of hot water. If the copper sulphate is powdered by grinding or otherwise it will dissolve readily in cold water. Add water enough to make 5 gallons and pour into spraying tank. The lime should be carefully slacked. Add enough water to make 25 gallons and pour slowly into the spraying tank. In slackening the lime for the work pour a little water over the lime; watch it closely and add more water in small quantities as needed. Care is taken to add enough to keep the lime from burning, but not enough to drown it. By using care it will be evenly slacked and nearly all of it

can be used in the mixture. A better mixture is made when the copper sulphate and lime are each diluted to 20 to 35 gallons before being mixed. It is also best for the milk of lime to be allowed to cool before it is added. It is advisable to keep the mixture thoroughly stirred while adding the milk of lime. A fine wire strainer should be used to strain it as it goes into the spray tank.

The mixture should be kept thoroughly stirred in the spray tank, either with the agitator attached to the pump or by the use of a paddle. Much depends upon keeping the mixture stirred. Several cases of failure the past season to get results from spraying in orchards visited were found to be due to not keeping the mixture thoroughly stirred in the spray tank. In one orchard the fruit and foliage were damaged on account of the mixture not being kept thoroughly stirred.

Where a large amount of spraying is to be done it is well to prepare the copper sulphate solution and have the lime slackened beforehand. Fifty pounds of the copper sulphate may be dissolved in 50 gallons of water, and 50 pounds of lime slackened and enough water added to make 50 gallons, which may be kept in covered barrels until it is desired to be used, when one gallon of each presents one pound each of copper sulphate and lime. Care should be taken that the milk of lime is thoroughly stirred before it is measured. Bordeaux mixture should be applied as soon as it is made; it deteriorates if allowed to stand.

WHEN TO SPRAY.—Prof. Stinson says the time to spray depends largely upon the season. The fungus attacks the fruit soon after it is formed, and the mixture which is used as a preventive should be applied early. An application given just before the trees blossom is important, and the second soon after the blossoms fall, not later than a week. The third may be applied from 12 to 20 days after, owing to the weather. If considerable rain falls after the second spraying, the third should be given earlier.

FOR CODLING MOTH.—The addition of paris green to the spraying mixture, one pound to 150 gallons of the mixture, lessens the damage done by this insect. It is advisable to add the poison to the mixture none of the mixture could be found upon the leaves or fruit, and the only conclusion is that the work was not properly done.

APPLE SCAB.—It is a well known fact that this disease can be controlled by the application of Bordeaux mixture to the trees early in the season. The use of the fungicide has become one of the necessities for successful apple growing. Apple scab injures the appearance of the fruit to such an extent some seasons that but a small part of the crop is marketable. If apples are plentiful, the experimental stage is past as far as this disease is concerned, for it has been demonstrated that it pays to spray to prevent it.

THE ASSOCIATION includes eight counties in Illinois, five in Missouri and one in Iowa. The president was authorized to appoint vice-presidents for all counties entitled to representation, with the exception of Adams.

The annual reports submitted showed that the association was in a very strong condition.

OUR SEEDS AND OUR GARDENS.

Editor RURAL WORLD: There is no good reason why the farmer should not have as good a garden, and as great a variety, as a regular market-gardener. The essential point in a garden or truck patch is good seed. What we mean by good seeds are those that have a reliable pedigree and well established characteristics, and are the best of their type and strain.

There is as much difference between an improved strain in the vegetable kingdom and one that has deteriorated till there is scarcely the germ of life left in it, as there is between a scrub and a well bred animal in the animal kingdom.

We notice the twentieth century spirit is animating our farmers and their wives. They are not satisfied with just anything that can be called a bean or a cabbage. They must have seeds that are guaranteed to be the very best of their kind, and of a good strain.

When we find a seedman that catalogs his seeds with a guaranty of purity, we feel as though we would make no mistake in ordering such seeds. In our 20 years of planting Burpee's seeds we find them true to name and strain. Even amateurs cannot fail in getting a good collection for a large or small garden from Burpee's catalog if they note the "bull's eye and monogram" or trade mark, which is a guarantee that the seeds are the best of their type. With selections of seeds, leaflets on the culture of the vegetable or flower seeds ordered will be sent. These in the most practical possible manner will be sent to you.

The application of arsenical poisons to the blooming trees is liable to kill the bees that are so necessary to the fruit grower, and it is also an injustice to the neighbor whose bees are killed. The application of Bordeaux mixture to the trees while in bloom injures the blossoms.

Prof. Beach, in giving results of recent experiments, in an address before the Western New York Horticultural Society meeting, says: "In every case where a blossom is fairly hit by the Bordeaux spray it is killed unless the fruit was already set. As the blossoms are in different stages of advancement, some already set, some just opening, etc., the yield of fruit is not diminished by spraying a full blooming tree in any one day. In seasons of scant bloom the practice would be dangerous, as it might kill a large percentage of the blossoms, and thus reduce the yield of fruit.

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AMBROSE L. RILEY.

Andrew Co., Mo. TYMANDA.



tree. As the tree grows the colony produced less stores, until it barely gathered sufficient to winter itself. We moved this colony out into the sunlight and it went back to its old record in honey making.

We set our hives facing the east, that the sun may shine on the entrance as soon as it peeps up in the morning, and further, that it may shine on the rear late in the evening in order to facilitate evaporation as long as possible. We use a temporary shade made with a few old staves tacked on a 2x2, two feet long, and which protects the top and sides of the hive, allowing a free circulation of air, and the sun to shine on either end as it is reached.

### BEE FEVER.

Editor RURAL WORLD: I believe that a rule people who make a success of beekeeping have had, at some time in their lives, what I call "bee fever." The conditions that bring on this fever are many and often perhaps unknown, but the effects of the fever are manifested in many ways. This fever afflicts people and bees.

When 12 years of age I was struck with this malady and its effects are still noticeable. About the first thing one will do when stricken will be to talk a great deal about bees and to purchase a stand or two. As the disease continues he will subscribe for some good bee journal and text book on bee culture. After reading the bee papers the patient will answer some of the many advertisements of the bee supply factories. When he has read the catalogs thoroughly an order will be made for some modern frame hives as well as for some implements to work with.

By this time the patient has sufficiently recovered from his first attack so that he is able to work fairly well with his bees. Indeed, we shall find that he takes more pains (?) with his work than would an experienced apiculturist, who understands his business.

This is a peculiar kind of fever, in that it never proves fatal, yet it has its "backsets." Perhaps after the amateur beekeeper has a good start in his business he finds that his locality is not a good one. Again, some sure enough bee disease may come along or some time a winter may come and almost destroy his apiary, much to his sorrow and loss. This might occur after he had reached a stage in beekeeping where he thought he knew it all.

We will not mention any more causes for "backsets," but will consider how he recovers from them. As he advances in bee knowledge and experience he learns of certain forage plants and trees that are good yielders of honey. He plants them along the roadsides and waste places of his farm, thereby improving the looks as well as the value of his farm. He also learns better methods of wintering and feeding and last but not least, that the secret of success is to have strong colonies at all times of the year. This will prevent moths and diseases from ever doing much damage to the apiary.

Of the many secrets of bee nature, some of them are being made known to him from time to time. After five or six years his business will have increased to such an extent that his apiary will number 40 or 50 stands in frame hives. The value of these will amount to \$120 to \$150, not including the cost of the implements. All of this has sprung from an investment of about \$3. Can you mention anything that will beat it for the amount of money expended?

Now the man's apiary has reached a point where it will be of some financial help to him—in fact it has been from the first year. On an average year the 40 colonies would net at least \$120, not counting the worth of the increase. If the apiculturist sees fit and wishes to make the bee business his life's vocation, he may increase the number of colonies until the amount of income he desires is reached.

One man has said that he would rather have the income from 300 stands of bees properly handled than the income from a 100-acre farm. I believe he was right, for \$900 would be a low estimate in the briefest space, and will enable you to have an up-to-date garden.

Lincoln Co., Mo. TYMANDA.

### 1901 SEED CATALOGUE FREE.

JAMES VICK'S SONS, Rochester, N. Y.

A GOOD MOVE.—When Carl Sonderer, proprietor of the German Nurseries, who has been advertising with us, moved his establishment from February, Neb., to Lincoln, Mo., it was a work of great business if the only advantages secured were better shipping facilities. Besides this, however, in planning anew he was able to arrange for greater permanence in his new home, and to obtain a good location for his plant. Sondreger has the somewhat unusual idea that a new customer, even though he has a good record, should be just as careful service as the larger buyer. The result in his case is that the new customer of last year is back this season with a larger order. All this is succeeded by one second order, and so on, which offers vigorous, healthy stock at remarkably low prices. He tells us that he has a very large stock of trees and forest seeds which are excellent for the home grounds.

His shipments by express last season were over 40,000 pounds and by freight more than 20 large carloads, the equivalent of 100,000 bushels of seed.

Orders are being broken for his catalog. Besides the lines embraced in a modern nursery stock are found many specialties needed on every farm, as well as the offer of premiums. Address German Nurseries, Beatrice, Neb., and mention this paper.

AMBROSE L. RILEY.

Andrew Co., Mo. TYMANDA.

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AMBROSE L

## Live Stock.

april 18—Boone Co. Shorthorn Breeders' Association. Columbia, Mo. April 21—M. N. H. Gentry and June K. King, Shorthorn cattle, Kansas City, Mo.

April 22 and 23—Two days combination April 23—100 high-class Shorthorns, from herds of June K. King, N. H. Gentry, Gentry Bros. and W. P. Harned.

March 22—W. H. Rigs, Mt. Sterling, Ill.

April 18—Boone County Shorthorn Breeders' Association, at Columbia, Mo. May 1-2—E. Jones & Co. and S. E. Prather & Son, at Springfield, Ill.

HEREFORDE.

May 21 and 22—C. A. Wabash, Ind., and others, at Chicago, Ill.

ABERDEEN ANGUS.

March 14—H. M. Gittman, Cisco, Ill.

March 14—J. D. Jones, Judy, M. T. M. and Son, Kansas City, Mo.

April 28-30—Haley Bros., Harris, Mo., and others, at Kansas City, Mo.

Mr. B. O. Cowan of New Point, Mo., has been elected assistant secretary of the American Shorthorn Breeders' Association. We congratulate the association on securing the services of so competent a man. It is our opinion that there are few men in the country who are so well fitted for the duties of the position as is Mr. Cowan. A regrettable result, however, of Mr. Cowan's moving to Springfield, Ill., where are located the offices of the association, will be his retirement from the breeders' ranks and the disposal of his splendid herd of Shorthorns. A sale of the herd will be held in October.

GRAND PRAIRIE, ARK., NOTES.

Editor RURAL WORLD: I feel that I owe an apology, through your columns, to Dr. Conaway of the Missouri experiment station. In a recent communication I stated that I had written to him for instructions as to how to inoculate cattle against Texas fever, but regretted that I had received no answer from him. Since that was published I have received quite a lengthy letter from him, in which he describes pretty fully the details of the operation. For all of which I feel under many obligations to him for his kindness.

In a recent issue of the RURAL WORLD Mr. Manning expresses surprise to hear that there have been any cases of Texas fever in this vicinity. It was not my purpose to get up any discussion with the gentleman. But my remarks were intended as a warning to northern people who, having read his first article, might have been induced thereby to bring down cattle to this country. Personally, I know nothing of the conditions that may exist in Woodruff county; but I have lived in an adjoining county, and not so very far away, for over six years, and I know from my own experience and observation that there has been plenty of fever near here. I could name dozens of men that have brought down valuable cattle from northern states, and when they have been turned out on the range with native cattle, they almost invariably die. There is no doubt or question about it. Any old settler living on this prairie will tell you the same thing. Experts who have been sent here to examine the cattle have found our stock infested with the true Texas fever tick.

If Mr. Manning has lived in that part of Arkansas for 25 years he ought to be better posted on the geography of our state. He says he would like to know what part of Monroe county is on Grand Prairie? I reply for his benefit that there is but little of it on the prairie. Still there is some, and your humble correspondent has the honor and pleasure of living on that part. If Mr. Manning will take a run on the Cotton Belt Railroad some fine morning, stopping at the first station south and west of White river, I will show him one of the prettiest stations on the road, and the most beautiful location for a town in the whole state. In fact, we regard it as the garden spot of the whole country. This little village lies in the edge of Grand Prairie and is in Monroe county.

F. TROTTER.  
Monroe Co., Ark.

EVANS-SNIIDER-BUEL SALES AT KANSAS CITY.

During the week beginning March 25 the Kansas City house of the Evans-Snider-Buel Company made sales as follows:

For Herbert Graves, Texas, 46 corn-fed steers, average 900 pounds, at \$4.15. This was a splendid price, pleased the shipper and gave evidence of the ability of this concern in serving the best interests of its patrons.

LeForce Bros., Indian Territory, 47 corn-fed steers that weighed 1,014 pounds, price \$4.40.

For the Stafford Land and Cattle Co., Oklahoma, 99 meat-fed steers that averaged 1,040 pounds, at \$4.30.

Another shipment by S. J. Soldan, Oklahoma, comprising 67 corn-fed steers, was good enough to show an average of 1,140 pounds, and Evans-Snider-Buel Co. in Kansas City made them bring \$4.45.

A top notch proposition included a shipment from LeForce Bros., Indian Territory, that sold as follows: Twenty corn-fed steers, average 1,230 pounds, \$4.75; 19 corn-fed steers, average 1,160 pounds, at \$4.60; one steer, 1,000 pounds, at \$4.60; one cow, 1,150 pounds, at \$4 per cwt.

Jas. H. Gilliland, Oklahoma, had a consignment consisting of 75 corn-fed steers that averaged 1,261 pounds and brought \$4.60.

Capt. C. W. Burt, Oklahoma, finished up his shipments of full fed cattle by a consignment consisting of 150 steers that averaged 1,060 pounds and brought \$4.15.

Mr. C. H. Bean, Kansas, favored the market with a shipment of 50 steers that averaged 1,133 pounds and brought \$4.55.

They were corn-fed.

A sale that is considered the best clearance of Texas meat-fed cattle and which afforded most satisfaction to shippers comprised 200 steers from the Central Texas Cotton Oil Co., averaged 901 pounds and brought \$4.575.

One Halverson, Indian Territory, had 28 head of corn-fed steers in the market, averaging 75 pounds, and which were fat and good enough to bring \$4.85.

The Hogman, Indian Territory, had 20 head of corn-fed steers in the market, comprising 50 head that averaged 1,261 pounds and brought \$4.65. This was a top notch sale in the quarantine division March 25.

HEAVY SHEEP LOSSES.

Buenos Ayres, March 28—A bulletin, just issued by the Chamber of Commerce, says that the foot and mouth disease and the invasions have caused heavy losses to the Argentine farmers that is the general belief. It is estimated that in the last year about 14,000,000 sheep perished, including the whole production of 160,000,000 kilos. Cattle also suffered, but less than sheep.

### CONTINUOUS PURE BRED STOCK SALES.

Editor RURAL WORLD: The introduction of the plan at the Union Stock Yards of South Omaha, of holding a continuous blooded live stock sale there, is meeting with much approval, not alone among stockmen, but others as well. General Manager W. J. Kerrison of the stock yards has had this plan under consideration for some time. The culmination was brought about by the general demand for sales of this character. In the past, on given days, sales of blooded stock have been held at these yards, but often people who desired to make purchases were unable to attend the sales and thus lost an opportunity to get what they wanted. In the future it will be different. No matter what time a buyer goes to the yards, he can be sure of getting what he wants, if the market is supplied, and it is said that there will be no need of complaint in this line.

Only a few years ago the stock raiser of the west thought that all he had to do was to secure a number of cows and turn them loose on his farm, to later be the owner of a marketable product. It is different now, and the shrewd breeder and stock raiser will only buy that which is the best when he is stocking his place. This fact has had much to do with the decision of the stock yards company of South Omaha to arrange for the sale of blooded stock every day in the week when the gates are open for business. Not alone are fine blooded cattle to be sold on the market, but horses as well. The growth and development of these yards as a horse market has been equally as great as that which affects cattle. Horsemen come from here all over the country to secure fine bred animals for all classes of work. New York, New Orleans, Boston, Philadelphia and other cities keep men here all the time to pick up horses that will meet the requirements of the patrons of the companies they represent. It is said that no better horses can be bought anywhere than right here at South Omaha. That the animals which are bred and raised on Nebraska prairies and tributary territory are strong, limber, free from disease, high spirited and reliable—much more so, in fact, than the horses that are generally found in other portions of the country, so it is seen that the possibilities of the South Omaha stock yards are not bound by the business that the great packing houses do, but that they extend to other branches and take in the various kinds of live stock.

Speaking of the establishment of a continuous sale of blooded live stock at these yards Col. J. M. Rhodes of Kentucky said: "Our state has always been proud of her horses and we have a right to be proud, but I believe that there are just as good horses to be had on the South Omaha market as there are on any market in our section of the country. One reason for this, in my opinion, is the number of Kentucky horses and brood mares that have been brought into this portion of the west. We have the blood down there, but Nebraska has the climate that gives the horse necessary vitality."

The management of the stock yards is arranging to still increase the accommodations for the handling of blooded stock, which comes here for a market. The large barns, capable of taking care of hundreds of head of horses and the sheds and pens where cattle are housed, are being put in the best possible shape. In a word, everything is being done that can be to contribute to the care of the animals and bring the seller and the buyer together with the least possible inconvenience. G. C. PORTER.

### STOCK NOTES.

MESSRS. POWELL BROS., the Shorthorn breeders, Lee's Summit, Mo., have issued a very neat catalog of their supplies, which they will be pleased to mail to anyone interested in Shorthorn cattle. Look up their advertisement and write them.

FINE SHORTHORNS BURN.—The C. P. Tutt of Bunceton, in which he had the fine Shorthorns comprising the Ashwood herd, was discovered to be on fire Tuesday night about 12 o'clock by a neighbor. By hard work all the cattle were removed except one fine cow and calf. Two other thoroughbred cows were severely burned; one of them valued at \$400, will probably die—Booneville, Mo.

H. A. BARBER, Windsor, Mo., says his crop of young calves is looking fine. Most of the calves are by the coming Cruckshank sire, Orange Duke 3d, which Mr. Barber sold to M. R. Amick, Calhoun, Mo. Mr. B. has a sold a Cruckshank steer to W. P. Harned, Vermont. Dainty, is doing well, now that he has become used to the change in climate. He now weighs a little over 2,000 pounds.

COL. R. L. HARRIMAN returned home last Friday from a tour of salemaking in Kansas. On Tuesday he sold Shorthorn and Thursday jacks and horses at Westphalia, Kan. He has a number of sales booked for next month, among the number being a combination Shorthorn sale at Columbia, Mo., on April 18, and on April 22 and 23 the big combination Shorthorn sale of Gentry Bros., W. P. Harned and June K. King of Kansas City—Bunceton, Mo.

JEFF HUME of Callaway county sold 22 head of mules last week to a party from Canada, says the Mexico "Intelligencer." One pair brought \$700, and the others \$165 each. The big team was 18 hands high and weighed 3,350, was exhibited at the most prominent fairs of this and other states, proving almost invincible. Apropos of this sale a dealer of this city tells a good story on Mr. Hume, who is very original and witty. Both were at the Illinois State Fair at Springfield last year, Mr. Hume with his mules and the dealer with show horses. Mr. Hume had some strong competition in the mule ring and wished to have an equal advantage could not overlook procuring a suitable vehicle to exhibit this team with. Mr. Hume was met by the dealer one morning and was asked where he was going. "To town after one of those 'gun tired' rigs to show my mules to," was the answer he hurried on.

T. F. B. SOTHAM of the Weavergrace breeding establishment, Chillicothe, Mo., has a letter from Mr. Edward B. Clark, Golconda, Ill., who purchased Improver's Heisold 107787 at Mr. SOTHAM's sale in Kansas City last January for \$355. He says: "Improver's Heisold fills the bill completely; I think him the best bull in the land, and so does every one that sees him. I was offered \$700 for him."

Mr. SOTHAM said at the time his young

bulls were sold for much less money than their real value, and although, as heretofore, the Weavergrace young bulls outsold those of any other breeding establishment this season, it is quite evident that Mr. SOTHAM is right, as is proven by this doubling in the value of Improver's Heisold in Mr. Clark's hands. Improver's Heisold is by Corrector out of Peerless 3d by Heisold; granddam by Perty, a son of Horace. This is a line of blood than which there is no better, that insures a good report of him in Clark's herd.

OTTO H. SWIGART, Champaign, Ill., the proprietor of the Avondale herd of Galloway cattle, places his advertisement in this issue. He has a most excellent herd of this breed of cattle, very uniform in quality, excellent coats of hair and strictly of the Galloway type. He has at the head of his herd two very good bulls of the breed as are living to day. King Henson 9967 is a Columbian and state fair winner and senior champion at the International Live Stock Show at Chicago in 1900. Imp. Druid of Castlemilk 17064 (GISE) the champion of Scotland, 1899. This bull will undoubtedly make his mark in this herd as a sire, as he is a grand animal individually and his immediate ancestors are all prize winners in Scotland. Mr. Swigart has a splendid lot of young bulls, principally by King Henson, and one of his sires, for sale that are worth looking after if you want anything in the Galloway line. He has a very neat catalog that it will pay one to send for, as it gives full information regarding this great herd.

A GREAT SHORTHORN SALE. One of the attractions of the year to Shorthorn breeders ought to be the combination sale at Kansas City, Mo., April 22-23, when will be sold 100 head of straight Scotch and Bates, some Scotch Bates and, a good sprinkling of Booth blood. The consignors are June K. King, Marshall; Gentry Bros., Sedalia; John Morris, Chillicothe; W. P. Harned, Vermont; Arthur Wallace, Bunceton; N. H. Gentry, Sedalia; Col. W. R. Nelson, Kansas City, and Capt. C. E. Leonard, Bell Air, all from Missouri, and Col. W. A. Harris, Linwood, and Fred Cowley, Columbus, Kas. From the reputation of the herds that will be represented in the sale and from the personal knowledge we have of them we can assure our readers that the offering will be of surpassing merit. There are some good animals in each herd, and the great breeds are not confined to any particular line of breeding. One will have a chance to buy animals good enough to go in any herd in America. Send to Mr. K. King, Marshall, Mo., for catalog and come to the sale at once and note the breeding of the different herds.

Receipts during March were 43,722 cattle, 181,150 hogs and 24,425 sheep. As compared with last March, cattle decreased 6,873, hogs increased 25,000, sheep 660. Receipts during week ending March 31 were 11,111 cattle, 20,000 hogs and 6,161 sheep, against 8,465 cattle, 17,247 hogs and 6,601 sheep the previous week. As compared with corresponding week year ago cattle increased 200, hogs 16,200, sheep 300. Receipts of cattle, hogs and sheep marketed for export were 114,500 cattle, 296,700 hogs and 125,500 sheep and against 161,200 cattle, 259,500 hogs and 115,000 sheep the previous week. As compared with year ago there was 10,000 less cattle, 1,000 more hogs and 1,500 more sheep.

Receipts in the native division were very light, and prices on the plain, heavy weight steers show a little decline, but we think there are any good to be had. Steers, steers, calves, heifers, calves, etc., are ruled steady. The medium classes, such as were selling so low a few weeks ago, show considerable advance over the low prices. There are not many good Texas cattle coming to market, and the pretty good kinds of cattle which come in direct competition with best grades are selling more ready and at more satisfactory prices than they did a month ago. The light weight butchers held firm, but were in active demand. Receipts of cattle, hogs and sheep marketed for export were 114,500 cattle, 296,700 hogs and 125,500 sheep and against 161,200 cattle, 259,500 hogs and 115,000 sheep the previous week. As compared with corresponding week year ago cattle increased 200, hogs 16,200, sheep 300. 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## Home Circle.

Written for the RURAL WORLD.  
EARLY BLOSSOMS.

Up from the brown and chilly earth  
The crocus lifts its dainty face,  
The snow drop, too, hath early birth,  
Than which no bloom hath more of grace.

Then violets come in gleeful crowd,  
Like happy children out from school,  
Naught heeding, tho' the winds speak loud,  
The air forbidding, damp and cool.

The early birds quick greet the flowers;  
Hilarious bursts of song are heard;  
Then comes the sudden dash of showers,  
As April welcomes bloom, and bird.

Of joyous ill of love and life;  
O bright, sweet days of early spring,  
When all the air with sound is ripe,  
When Nature seems to smile and sing.  
—May Myrtle.

Written for the RURAL WORLD.  
THE GOOD MANAGER.

There is none so envious as the woman who so manages her household affairs as to always have the home in order, to always be ready for company without a moment's notice; or who is never too busy for a ride to town when John announces hurriedly at the kitchen door "the team is going to town, and if you'll hurry up you can go, too."

But, if a close study is made of this fortunate woman, you'll find first that there is a place for everything, and everything is in that place. Second, you'll find this wondrously woman improves the morning hours. The things that must be done are the first ones disposed of. Many a woman permits her household cares to crowd her by neglecting to keep ahead of them. One may not feel very brak in the morning, and the putting the house in order and caring for milk vessels, and such tasks are postponed; and perhaps some reading is done while regular daily tasks are waiting attention. The rest and reading are not fully enjoyed, because all the while there is mental unrest, because disorder prevails. My first care has always been to put the house in order, even on wash day, and then, if a friend called or request was made for early dinner, I was not fretted because chaos prevailed.

But most important of all, the good manager knows what to do and what to repeat; yes, what to neglect, I repeat. Most housekeepers can see what to do; but the omission that help so materially to give the so much needed hour for rest and reading are puzzles. Some things can not be left undone. Find these out, and do them. Then search for the things that can be left undone, and religiously leave them undone. In the majority of instances they will be things that your most critical neighbor will never discover. And don't tell her. Better let her see the evidences of your wise management and command you for your skill as a housekeeper.

My study of the good manager has revealed to me that she is not a "happening," but is the result of plan and system. One such that was entertaining a number of guests when other duties at the same time demanded thought and time, took pencil and paper and planned for each meal to be served while the friends remained. This disposed of that very important problem when entertaining friends, "what shall I cook?"

Each housekeeper must master her individual conditions and environment. The plan that would aid one, would hinder another; but system, wise use of the forenoon and knowing what to leave undone are three marked earmarks of the good manager. MRS. MARY ANDERSON. Caldwell Co., Mo.

Written for the RURAL WORLD.  
A MAN'S OPINION.

Yes, spring is here. In this part of the state we have had one of the most pleasant of winters. Now the frost is coming out and it is raining. Oh! how nasty and disagreeable is the farmer's life at this season, with rain and mud ankle deep! It is nice to pick up our farm papers and read what a nice and pleasant life is that of the farmer, but alas! it has its ups and downs the same as any other life.

I was born and raised on a farm and expect to live on the farm as long as I can keep soul and body together and can farm. I was quite amused at Blue Bell's letter in the March 6 issue when she says we men should remove our coats and boots at the door and have slippers and a clean coat to slip on. Why, she is as bad as my mother was some few years ago, when the flies were awful bad. She used to make us go down in the cellar and come up through by way of the steps coming into the dining-room. Why, if we farmers would change our boots and coats every time we come in these bad, stormy days we would do nothing else.

Blue Bell's letter reminds me of a true incident that occurred some years ago. A lady living in our county had staying at their farm a demented fellow whom she had to remove his boots at the door when he entered the house. One day a stranger came to their home and the crazy fellow was trying to make him take off his boots, when, greatly to the stranger's relief, the lady of the house appeared on the scene.

Nevertheless, Blue Bells, you are all right in your ideas, as there is nothing more cheerful than a tidy home, and as a general thing we men folks never appreciate cleanliness and tidiness until we enter some home that is unkempt and untidy.

Myrtle wrote and told us about Mrs. Hildebrand killing her eight children on account of despair caused by some real estate agent closing the mortgage. In my opinion if this man were the direct or indirect cause of these seven murders, was unto him! Let us all be kind to the poor and assist them in any way we can. It has been many years since a tramp has been turned from our door empty-handed. BILL SYKES.

MRS. Winslow's has been used for over sixty years by millions of mothers for their children while teething. Winslow's Liniment oil and benzine in the proportion of one teaspoonful of benzine to a quart of oil, to oil hardwood floors. After rubbing it into the wood she rubs smooth with a soft cloth.

TO CLEAN OLD WALL PAPER.—One way is to put two quarts of wheat bran into a coarse hamper bag and run the well lighted coals of the fire over the surface. Another way is to rub the paper with a flannel cloth dipped in dry cornmeal or oatmeal.

Written for the RURAL WORLD.  
SALAD AND "OLD DOG TRAY."

It is I, not the March wind, at the door of the Home Circle to-day. Winter is among our hills and vain again, receiving a royal welcome from the traitorous hearted March, so I have sought the cosiness of this retreat.

Only a couple of days ago I went out to look for wild lettuce, but found only a few of the purplish green clusters of leaves, too small, as yet, for salad. For the folks on the farm who cannot obtain garden lettuce early in the spring, wild lettuce (Mulgiedium) is a good substitute. It grows in waste places—and, unfortunately, it grows better still in cultivated places, strawberry patches, for instance.

During March and April it is not bitter and makes quite an appetizing salad. It should be washed and thrown for ten or 15 minutes in a pan of cold water. Then drained and chopped rather fine, as it is not crisp like garden lettuce. For dressing, a tablespoonful of hot pork or bacon gravy should be poured in a bowl containing three tablespoonsfuls of vinegar, the powdered yolk of a hard boiled egg, a pinch of salt and one of pepper. Into the mixture stir the chopped lettuce and garnish with thin slices of hard boiled eggs.

Brother Lyon's description of the death of those poor, mangy sheep, recalls the first grief which I can remember throwing its dark shadow into the brightness of my early life. When a wee bairn I took a fancy to a black, curly lamb in a flock of sheep which a drover was driving past our house. As my indulgent father humored my slightest whim, the drover was stopped and the lamb purchased. It was my beloved playmate and companion until it was a full grown sheep, a black one, to be sure, but such a beauty!

One day we were playing, as usual, on the prairie in front of the house when two fierce dogs sprang upon "Betty" and tore her to pieces, although my mother and a neighbor, hearing my screams, hurried to the spot and vainly tried to save the poor thing. Still all dogs are not savag[e] bloodthirsty creatures. I remember, when a few years afterward, a delicate little being crept out into the garden of a big house in the city to seek her heart out in a paroxysm of homesick despair, when, out of the darkness, a shaggy paw was thrust gently upon the childish head and, lifting her face, the weeping lassie met the sympathizing gaze of the pitiful brown eyes of the house dog. And therefore those two were loyal friends. As a class, dogs really harm people less than other animals do, which is surprising when one considers the immense number of lawless, uncared for mongrel curs which runts at large.

Not one death in ten thousand is caused by hydrophobia, yet horrible as such a death must be, I doubt if it is more awful than one caused by delirium tremens, either to the sufferer or the attendants.

Personally, I can not recall a single instance in which any friend or acquaintance of mine has been seriously injured by a dog, yet the number of those killed or injured for life by horses can not be reckoned—Roman fashion—on my ten digits!

The same can be said of people whom I have known to be killed or crippled by vicious cattle and yet who would wish the noble horse or the cow to disappear from the haunts of man?

Again my luckless remark regarding missing dogs as much as flowers and birds, I hold steadfast to the statement, although the Latin of my school days is buried under too many strata of other subjects to permit me to comprehend the full meaning of Brother Lyon's parting thrust.

But if we are to destroy things which are pernicious to the human race, even flowers would be doomed. Have we not read of people dying in convulsive agony from inhaling the perfume of poisonous flowers? And the gifted Miss Landen is said to have died from strychnine obtained from the lovely oleander blossoms. I am acquainted with a lady who is made ill by the proximity of odorous flowers of any kind—roses not excepted.

Birds, however, I believe are perfectly harmless to our species—although now that I think of the subject, I have heard of eagles carrying off little children and striches killing men, not to mention the vultures that preyed upon Prometheus. That tale always made me think it was a poetical way of saying the poor man had dyspepsia.

But I think, after looking over the whole list of pets, if my little brown dog were to die, I'd try very hard to get another just like him, for

"He's gentle and he's kind,  
And you'll never, never find  
A better friend than old dog Tray!"

MRS. ADELA S. CODY.  
St. Louis, Co., Mo.

Written for the RURAL WORLD.  
CHILDREN'S FLOWER SHOW.

For several years I have been thinking over a subject in which I am much interested—children and flower shows. If we get the children interested in any subject, we have the parents interested, too. Now this is what I thought would be a good way to awaken interest. Many firms offer collections of seed for a small sum—some even advertise "children's collections." One firm sends out 14 packages of different seed for 10 cents, and throws in its magazine free for three months. "Most too much promised for so little," you say? It looks so, but I always buy them, and invariably raise some flower new to me, for one of the packets is mixed seed.

Now, my idea was to send for 40 or 50 of these or some other collections, visit the public schools and sell them to the scholars for 5 cents a package more than they cost. This extra money to be spent for advertising, etc.

Talk to the children, telling them that as they all have the same kind of seeds, they all have an equal chance for the prizes which will be offered at a flower show to be held at a certain time in the fall. Have the list of premiums as large as possible, so that many will stand a chance to win a prize. A small fee should be charged for admittance to the show to help pay premiums and expenses.

MISS M. A. BUCKNELL.  
Madison Co., Ill.

## FOR THE MAN WHO FAILS.

The world is a snob, and the man who wins  
Is the chap for its money's worth;  
And the lust for success causes half of  
the sins.

That are cursing this brave old earth,  
For it's fine to go up, and the world's  
applause.

Is sweet to the mortal ear;  
But the man who fails in a noble cause  
Is a hero that's no less dear.

This true enough that the laurel crown  
Twines but for the victor's brow;  
For many a hero has lain him down  
With naught but the cypress bough,  
There are gallant men in the losing fight,  
And as gallant deeds are done

As ever graced the captured height,  
Or the battle grandly won.

We sit at life's board with our nerves  
high strung

And we play for the stake of fame,  
And our odes are sung and our banners hung

For the man who wins the game.  
But I have a song of another kind.

That breathes in these fame-wrought  
gales—

An ode to the noble heart and mind  
Of the gallant man who fails!

The man who is strong to fight his fight,  
And whose will no front can daunt,  
If the truth be truth and the right be right,  
Is the man that the ages want,

Tho' he fail and die in grim defeat,  
He has not fled the strife,

And the house of Earth will seem more sweet

For the perfume of his life.  
—Paul Laurence Dunbar.

## Written for the RURAL WORLD. SORGHUM COOKERY.

Judging from the recipes appearing in the RURAL WORLD your readers know but little about sorghum cooking. This, perhaps, is logical, when one considers the indifferent quality of much of the sorghum syrup on the market, for it is undisputable that many manufacturers of sorghum are criminally careless of their product. Agitation of this subject and education and individual pride in one's business will work a much needed change, it is to be hoped, in the quality of this product.

Now for the cookery, if you cannot always get as good a quality of syrup as you would like, get the best you can.

SORGHUM GINGER CAKES—One cupful of sorghum, one cupful of sugar, two eggs, one teaspoonful of cinnamon, one teaspoonful of ginger, one teaspoonful of soda, one cupful of sweet milk, one teaspoonful of softened (not melted) butter. Mix the sorghum, sugar, softened butter, and eggs, and whip to a thin cream. Then add the spices, then the milk, and lastly the soda mixed with a little flour. Then stir in the flour and bake at once in a moderate oven. Serve hot. It is eatable cold, however, with a little butter. Be careful to put this together exactly as directed.

If you desire something a little more "high-toned" than the foregoing, which may once and you never will regret it, take a half pound or so of the most tender apples you can get, wash and chop coarsely, and put into enough good sorghum to cover well. Set on the back of the stove in a stew pan and let simmer slowly till the apples are candied; then add as many as you wish to your ginger cake just before putting into the oven. If you don't say this is far ahead of a majority of the much more expensive fancy cakes, your taste, or mine, be sure to let this be known to all.

S. R. McCONN.  
BIRMINGHAM, ALA.

## A FAIR DISCUSSION OF INCUBATORS, SELLING IT THE MERITS OF THE RURAL WORLD.

Any body who wants to try it will be given 10 copies this week without charge, to sell at 5 cents each; after that at the wholesale price.

The Curtis Publishing Company  
Philadelphia

## Carrie Nation and Kansas.

By William Allen White

The author of "What's the Matter with Kansas?" brings the discussion up to date in an able special article, which will appear in an early number. Mr. Whitewill be a frequent contributor to

## THE SATURDAY EVENING POST

OF PHILADELPHIA

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We will also send, without extra charge, a copy of the two books, "The Young Man and the World" and "The Making of a Merchant." These books are reprints of famous articles which have appeared in the Post.

## Boys Who Make Money

In a dainty booklet 35 cent of some 800 boys tell in their own way just how they made a success of selling

## THE SATURDAY EVENING POST

From the Curtis Publishing Company

Philadelphia

PRIZE WINNING

White Holland Turkeys

Barred Plymouth Rock

White Wyandottes

Black Langshans

White Rock





WRITE FOR CATALOGUE—"THE PRIDE OF THE NEW CENTURY."

## The Markets

**WHEAT**—Cash Market—Milling demands light and only for choice, with hard winter chiefly sought after. Exporters were also after No. 2 hard. By sample No. 2 red sold at \$14.25 to \$15.00 per bushel, while at \$12.50; No. 3 hard at \$12 to \$12.50; No. 4 hard at \$10 to \$12.

**CORN**—Cash Market—No. 2, 42½¢ for No. 3 and 43½¢ for No. 2 yellow; there were no buyers, save at largely lower prices.

**OATS**—Cash Market—Offerings small. By sample, No. 3 sold at 27½¢ to 28½¢; No. 3 quoted at 27½¢ to 28½¢; No. 4, 5 white sold at 28½¢ to 29½¢; No. 5 white sold at 28½¢ to 29½¢; No. 6 white sold at 28½¢ to 29½¢.

**RYE**—Not quite so strong, yet well maintained in price, 2 cars No. 2 selling del. at \$12 to \$12.50.

**HILLBRED**—Buyers generally would not pay over 76¢ for ordinary or 77¢ for choice. At mill bran sells at 76¢ to 80¢ and ships at 80¢.

Wheat and clover quiet, even for the best. Current rates on trunks, mostly \$12.50 to 13.50 for choice, \$12.50 to 13.50 for No. 1, \$12 to 13 for No. 2; \$12.50 to 13.50 for No. 3, prairie, \$12.50 to 13.50 for No. 4, prairie, \$12.50 to 13.50 for No. 5, clover, \$12.50 to 13.50.

### PRICES ON CHANGE.

The following tables show the range of prices in future and cash grains:

	Closed Saturday.	Range	Closed Monday.
<b>Wheat</b> —	... 74½¢ to 75	73½¢ to 75	73½¢ to 75
July—	73½¢ to 75	73½¢ to 75	73½¢ to 75
<b>Corn</b> —	42½¢ to 41½¢	41½¢ to 42½¢	41½¢ to 42½¢
July—	42½¢ to 41½¢	41½¢ to 42½¢	41½¢ to 42½¢
<b>Oats</b> —	27½¢ to 26½¢	26½¢ to 27½¢	26½¢ to 27½¢
July—	26½¢ to 25½¢	25½¢ to 26½¢	25½¢ to 26½¢
<b>Cash wheat, corn and oats.</b>	Range	Range	Range
Wheat—	73½¢ to 75	73½¢ to 75	73½¢ to 75
July—	73½¢ to 75	73½¢ to 75	73½¢ to 75
<b>Corn</b> —	38½¢ to 38½¢	38½¢ to 38½¢	38½¢ to 38½¢
July—	38½¢ to 38½¢	38½¢ to 38½¢	38½¢ to 38½¢
<b>Cash wheat, corn and oats.</b>	Range	Range	Range
Wheat—	73½¢ to 75	73½¢ to 75	73½¢ to 75
July—	73½¢ to 75	73½¢ to 75	73½¢ to 75
<b>Cotton</b> —	2 red. 72½¢ to 73	72½¢ to 73	72½¢ to 73
July—	6½¢ to 7½¢	6½¢ to 7½¢	6½¢ to 7½¢
<b>Wool</b> —	Market showing no change; quiet on the finer grades, while on the coarser, while on the finer grades.		
<b>Wool—Missouri and Illinois</b> —Medium combing, 15½ to 18½¢; medium clothing, 17½¢; broad and low, 16½ to 18½¢; burly and burly, 18½ to 20½¢; lamb, 15½ to 18½¢; heavy fine, 11½ to 12½¢; lamb, 15½ to 18½¢; Indian Territory and Oklahoma—Medium, 16½¢; coarse and low, 12½ to 13½¢; fine medium, 10½ to 11½¢; Arkansas and Southern—Medium (sheecos), 17½ to 18½¢; medium (loose), 16½ to 17½¢; burly, 12½ to 13½¢; hard burly, 20½ to 22½¢; Tub-washed—No. 1, 27c; No. 2, 22½¢; No. 3, 18½¢; No. 4, 15½¢; No. 5, 12½¢; Clean and clear, 15c; burly and cotted, 18c; Black and seedy from 4c to 6c per pound.			
<b>Cotton—Ordinary</b> —6½¢ good ordinary; 6½¢; low middling, 7½¢; middling fair, 8½¢; good middling, 8½¢; middling fair, 9½¢.			
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